**EPA / MtBE HEARING**
**Sacramento, California**
**March 25,1999**

**by**
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**President, Board of Directors**
**South Tahoe Public Utility District**
**South Lake Tahoe, California**

## INTRODUCTION & THANK YOU

I am not here today to discuss the relative merits of MtBE in improving air quality or the health impacts as more qualified persons will do that. I want to present to this panel issues that have had a major impact upon the South Tahoe Public Utility District (STPUD). As an elected official and decision maker, I can tell you that this issue has dominated our recent efforts.

In addition to the direct impacts of MtBE on our groundwater supply, there are related issues that heavily impact our staff, management, and Board of Directors. The operations of the system have been complicated because we have essentially lost our backup. This has required a great deal of ingenuity by our operators to keep an adequate supply, in the different pressure zones, and maintain adequate amounts in the water storage tanks.

In the case of South Lake Tahoe, the horse is already out of the barn. We can only hope that we can contain the problem and keep the long-term pollution threat to a minimum. We have lost 13 of our 34 production wells. At this point, we have destroyed two contaminated wells and have drilled one new well. Currently, we have 33 wells within our system.

## IMPACTS

The impacts of MTBE contamination on our system are far-reaching.

* Strains on the entire water system, placing higher stress on remaining production wells and complicating pumping water between different pressure zones.

* Master water plan became obsolete, virtually overnight.

* The District has hired new staff.

* The current staff is spending additional untold hours on MtBE related issues, taking time away from other important projects.

* Management and the Board of Directors have spent a significant portion of their time on MTBE issues.

* An air stripper used to remove PCE from one well has drawn in MtBE from the air that is entrapping MTBE in the water, where none had been detected in the well.

* STPUD contracts with a laboratory that now does hundreds of tests for MTBE, which cost in the $10's of 1000's (@ approximately $100 per MtBE test).

* Last year's water conservation program will certainly become mandatory again this coming summer. Our water demand triples during the summer months.

* Impacts may extend to the vitality of Tahoe's tourist economy.

* Businessmen are being struck with huge remediation costs. Repayment from the State cleanup fund has been slow, causing cash flow problems for these businesses.

* Remediation programs to clear up MtBE plumes have been unreliable.

* The City of South Lake Tahoe has been planning a redevelopment project, which includes a child care center. We now find that is to be built on top of a MtBE plume that is over 1 million ppb.

* Buyers are hesitant to buy a home that may have MTBE in the water, thus potentially affecting property values.

Discharges from sewage treatment plants are now containing MtBE. In the case of STPUD, our treated effluent is pumped out of the Tahoe Basin to a holding reservoir in Alpine County and used for agricultural purposes. This recycled water is pumped 26 miles over 7,000 foot high Luther Pass. MtBE has now shown up in the reclaimed water in our storage reservoir. The source of this MtBE may be due to breakthroughs at remediation systems, at one or more existing MtBE plumes. Another source may be the contribution to the sewer system from an area where the water is supplied by a small water system that draws its water directly from Lake Tahoe. The wastewater treatment plant, using a standard activated sludge secondary treatment process, does not remove MtBE from the sewage flow.

Because the recycled waters are used for irrigation of pasture lands in Alpine County, the local farmers and citizens are concerned. The Nevada Environmental Protection Agency has also shown concern because any runoff or groundwater movement would flow into Nevada via the Carson River Basin. We now have a problem that originated in California that may affect Nevada.

**LEAKING UNDERGROUND FUEL TANKS - COMMENTS**

The representatives of the oil industry and their related associations will argue that the contamination of groundwater aquifers is caused by leaking underground fuel tanks. They mistakenly believe that new regulations will solve the problems. Their idealistic view is not reality in the world that we have to deal with. As long as MtBE is in our gasoline, there will be MtBE in our groundwater.

As a result of our experiences at Lake Tahoe and as a member of the Governor's Advisory Panel on L.U.F.T., it has become obvious to me that there needs to be improvements in the design of the systems, as well as additional requirements for training and licensing of contractors, construction inspectors, owners/operators, and inspectors monitoring the operations.

There will be leaks from (1) improperly installed gasoline distribution systems, (2) improperly operated systems, and (3) many small discharges from refueling vehicles. These problems will not stop just because the tanks have been replaced or upgraded. We have found human error, that has in several cases, magnified the contamination problems. Station operators, with little or no training or understanding of the operations, have ignored leaks and disabled detection systems or alarms.

New and upgraded tanks can leak and yet meet the existing standards. The California Codes allows a gasoline station system to leak up to 0.1 gal/hr. This projects to 2.4 gal/day or 240 gallons of gasoline in 100 days. That amount of gasoline, with 11 percent MtBE, can contaminate an aquifer one mile square and 100 feet deep to the California secondary standard of 5 ppb. (Ref: CA Code of Regulations, Title 23. Water, Div. 3: Water Resources Control Board, Chapter 16: U.S.T. Regulations, Section 2643: Non Visual Monitoring / Quantitative Release Detection Methods)

**WHY TAHOE?**

MTBE is a ticking time bomb, waiting to explode in other communities, like it has in ours. We may be one of the first, but others will face these same problems. South Lake Tahoe was hit early and hit hard because of high groundwater( often less than ten feet below the surface), highly porous or permeable soil and a confined aquifer with relatively fast moving water (1 to 3 feet per day). Conditions at South Lake Tahoe are an indication of future and massive contamination in other parts of California and other parts of the United States. Even if MtBE is eliminated from our gas today, there will be a groundwater legacy that will need to be addressed. The MtBE legacy will haunt our nation for years and perhaps decades at a cost that will certainly will be in the many hundreds of millions of dollars just in California.

There are methods to treat or remove MtBE from water, however the cost is staggering. The cost that we will have to pass on to our customers will be significant. This is to treat mountain pure water that averages about 70 part per million of total dissolved

solids. As the plumes of contamination spread, the cost for pumping and treatment will increase significantly. Many of our plumes have, in less than a year, doubled in plume length, width and depth.

Low concentrations in our wells have rendered 13 of our 34 productions wells useless. Available data that has been published shows low levels of MtBE . This may be misleading because when productions or nearby monitoring/sentinel wells showed any sign of MtBE, they were immediately shut down to avoid supplying any MtBE contaminated water to our customers. Furthermore, the wells were shut down to prevent drawing the MtBE plume into the zone of influence of the production wells. It was hoped that in the future, it would be easier to rehabilitate those wells, as the plumes are remediated.

The STPUD is in the process of forming a local ground water management plan to facilitate and accelerate the process of protecting our groundwater aquifer. We have found that the local regulatory agency could not act quickly to prevent or stop discharges from leaking underground storage tanks. Recent performance audits by the California Bureau of State Audits have shown that during the past administration, our local Lahontan Regional Water Quality Control Board, the State Water Resources Control Board, and the Department of Health Services had weaknesses in their responses to the MtBE problem. We have timetables to serve water that cannot wait for slow reacting bureaucratic agencies to react. Hopefully, the new administration will respond in a more timely manner.

We have no alternative water source, so we must protect our aquifer. For STPUD, Lake Tahoe is not an alternative water source for several reasons. We do not have any water rights from the Lake, and if we did, we do not have the infrastructure to treat surface water and distribute the water. Additionally, at the end of last summer, the Lakeside Mutual Water District was pumping lake water from 2,500 feet off shore at a depth of 100 feet with a MtBE concentration of 5 ppb.

**CONCLUSIONS**

Even though there is evidence that MtBE may improve the exhausts from older vehicles, we cannot continue to pollute our water supply. The oil industry must find a solution that will not continue polluting our water supply. There may not be clear cut evidence that MtBE is a carcinogenic agent, but there certainly are enough strong indications. We need more studies on not only inhalation, but ingestion impacts.

We already have a massive problem on our hands, problems for which MtBE manufacturers are financially responsible. We ask that the Environmental Protection Agency use their emergency powers to ban MtBE, in order to prevent even more contamination problems in South Lake Tahoe and California, as well as the other states of this nation that are forced to use MtBE.

**JAMES RICHARDSON JONES**

**ADDRESS**

P.O. Box 789, South Lake Tahoe, CA 96156

**EDUCATION**

B.S. Civil Engineering, California State Polytechnic University, 1968

M.S. Civil Engineering, Stanford University, 1972

## REGISTRATIONS AND CREDENTIALS

California Registered Professional Civil Engineer, No. 22379
Nevada Registered Professional Civil Engineer, No. 4562
Hawaii Registered Professional Civil Engineer, No. 5582
California Community College Instructor Credential, No. 63840

## EXPERIENCE

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| January 1977 - Present: | Consulting Civil Engineer<br>J. R. Jones & Associates<br>South Lake Tahoe, CA |
| 1977 - 1989, 1993 - Present: | Director, South Tahoe Public Utility District<br>South Lake Tahoe, CA |
| January 1974 - January 1977: | Staff Director, Lake Tahoe Area Research Coordination Board |
| September 1972 - January 1974: | Sanitary Engineer<br>Environmental Protection Agency<br>San Francisco, CA |
| June 1968 - July 1971: | Civil & Sanitary Engineer<br>U. S. Bureau of Reclamation<br>Sacramento, CA and Denver, CO |

## ADDITIONAL INFORMATION

Appointed to Governor Wilson’s Advisory Panel on Leaking Underground Fuel Tanks and MTBE

Chairman, MTBE Workgroup of the Association of California Water Agencies